United Nations

Report of the Committee on the Peaceful Uses of Outer Space

General Assembly
Official Records • Forty-ninth Session
Supplement No.20 (A/49/20)

Report of the Committee on the Peaceful Uses of Outer Space

General Assembly
Official Records • Forty-ninth Session
Supplement No.20 (A/49/20)

United Nations • New York, 1994

NOTE

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

ISSN 0255-1144

[Original: English]

[12 August 1994]

CONTENTS

		Paragraphs	Page
I.	INTRODUCTION	1 - 18	1
II.	RECOMMENDATIONS AND DECISIONS	19 - 173	4
	A. Ways and means of maintaining outer space for peaceful purposes	19 - 24	4
	B. Report of the Scientific and Technical Subcommittee on the work of its thirty-first session and implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space	25 - 103	5
	1. Report of the Scientific and Technical Subcommittee on the work of its thirty-first session	26	5
	2. Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space	27 - 54	5
	3. Matters relating to remote sensing of the Earth by satellites, including, inter alia, applications for developing countries	55 - 61	12
	4. Use of nuclear power sources in outer space	62 - 69	13
	5. Space debris	70 - 82	14
	6. Space transportation systems	83 - 87	15
	7. Examination of the physical nature and technical attributes of the geostationary orbit; examination of its utilization and applications, including, inter alia, in the field of space communications, as well as other questions relating to space communications developments, taking particular account of the needs and interests of developing countries	88 - 91	16
	8. Matters relating to life sciences, including space medicine; progress in national and international space activities related to the Earth environment, in particular progress in the geosphere-biosphere (global change) programme; matters relating to planetary exploration; and matters relating to astronomy	92 - 98	16

CONTENTS (continued)

	Paragraphs	Page
9. Themes fixed for special attention at the thirty-first and thirty-second sessions of the Scientific and Technical Subcommittee	99 - 103	17
C. Report of the Legal Subcommittee on the work of its thirty-third session	104 - 133	18
1. Question of early review and possible revision of the principles relevant to the use of nuclear power sources in outer space	105 - 110	18
2. Matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union	111 - 122	19
3. Consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries	123 - 133	20
D. Spin-off benefits of space technology: review of current status	134 - 141	22
E. Other matters	142 - 164	23
1. Reports to the Committee	142 - 143	23
2. Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space .	144 - 149	23
3. The question of the review of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies	150 - 153	24
4. Membership of the Committee	154 - 157	25
5. Methods of work of the Committee and its subsidiary bodies	158 - 162	25
6. Records of the Committee	163 - 164	26
F. Future work	165 - 170	26

CONTENTS (continued)

	Paragraphs	Page
G. Schedule of work of the Committee and its subsidiary bodies	171 - 172	28
H. Tribute	173	28
Annex. Working methods and possible additional agenda items for the Legal Subcommittee		29

I. INTRODUCTION

1. The Committee on the Peaceful Uses of Outer Space held its thirty-seventh session at the United Nations Office at Vienna from 6 to 16 June 1994. The officers of the Committee were as follows:

Chairman: Peter Hohenfellner (Austria)

Vice-Chairman: Petru Forna (Romania)

Rapporteur: Edgard Telles Ribeiro (Brazil)

The verbatim records of the meetings of the Committee are contained in documents A/AC.105/PV.393-405.

Meetings of subsidiary bodies

2. The Scientific and Technical Subcommittee held its thirty-first session at the United Nations Office at Vienna from 21 February to 3 March 1994 under the chairmanship of John H. Carver (Australia). The report of the Subcommittee was issued as document A/AC.105/571.

3. The Legal Subcommittee held its thirty-third session at the United Nations Office at Vienna from 21 March to 5 April 1994 under the chairmanship of Václav Mikulka (Czech Republic). The report of the Subcommittee was issued as document A/AC.105/573. The summary records of the meetings of the Subcommittee are contained in documents A/AC.105/C.2/SR.572-579.

Adoption of the agenda

4. At the opening meeting of the Committee, the view was expressed that a sub-item covering the methods of work of the Committee and its subsidiary bodies should be added to item 9 of the provisional agenda, entitled "Other matters".

5. At its opening meeting, the Committee adopted the following agenda:

1. (a) Adoption of the agenda;

   (b) Election of a Vice-Chairman.

2. Statement by the Chairman.

3. General exchange of views.

4. Ways and means of maintaining outer space for peaceful purposes.

5. Report of the Scientific and Technical Subcommittee on the work of its thirty-first session.

6. Report of the Legal Subcommittee on the work of its thirty-third session.

7. Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

8. Spin-off benefits of space technology: review of current status.

9. Other matters.

10. Report of the Committee to the General Assembly.

Membership and attendance

6. In accordance with General Assembly resolutions 1721 E (XVI) of 20 December 1961, 3182 (XXVIII) of 18 December 1973, 32/196 B of 20 December 1977 and 35/16 of 3 November 1980 and decision 45/315 of 11 December 1990, the Committee on the Peaceful Uses of Outer Space was composed of the following Member States: Albania, Argentina, Australia, Austria, Belgium, Benin, Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, China, Colombia, Czech Republic, Ecuador, Egypt, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Italy, Japan, Kenya, Lebanon, Mexico, Mongolia, Morocco, Netherlands, Niger, Nigeria, Pakistan, Philippines, Poland, Romania, Russian Federation, Sierra Leone, Spain, Sudan, Sweden, Syrian Arab Republic, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela, Viet Nam and Yugoslavia.

7. At its 393rd, 396th and 399th meetings, the Committee decided to invite, at their request, the representatives of Algeria, Cuba, the Libyan Arab Jamahiriya, Nicaragua, Panama, Peru, Portugal, the Republic of Korea, Saudi Arabia, South Africa, Thailand, Turkey and Yemen to attend the thirty-seventh session of the Committee and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that it would not involve any decision of the Committee concerning status.

8. Representatives of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Telecommunication Union (ITU) and the International Atomic Energy Agency (IAEA) also attended the session.

9. Representatives of the Association of Space Explorers (ASE), the Committee on Space Research (COSPAR) of the International Council of Scientific Unions (ICSU), the European Space Agency (ESA), the International Astronautical Federation (IAF), the International Law Association (ILA), the International Organization of Space Communications (INTERSPUTNIK) and the International Society for Photogrammetry and Remote Sensing (ISPRS) also attended the session.

10. A list of representatives attending the session is contained in document A/AC.105/XXXVII/INF/1.

Commemoration

11. The Committee commemorated the twenty-fifth anniversary of the United States Apollo 11 mission and the first lunar landing conducted by astronauts Edwin Aldrin and Neil Armstrong.

Proceedings

12. Having been informed that its Vice-Chairman, Aurel Dragos Munteanu (Romania), had taken up other professional engagements, the Committee, at its 393rd meeting, elected Petru Forna (Romania) as its new Vice-Chairman.

13. At the 393rd meeting, the Chairman of the Committee, in his opening statement, summarized the work of the subsidiary bodies of the Committee and outlined the work before the Committee. He stressed the need to increase

international cooperation in the peaceful uses of outer space and to ensure that the benefits of such cooperation were shared by all countries and all peoples (see A/AC 105/PV.393).

14. At the same meeting, the Chief of the Office for Outer Space Affairs of the Secretariat made a statement reviewing the work of the Office during the previous year and the documentation before the Committee (see A/AC.105/PV.393).

15. At its 393rd to 397th meetings, on 6-8 June 1994, the Committee held a general exchange of views, in the course of which statements were made by the representatives of Argentina, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, China, Cuba, the Czech Republic, Ecuador, France, Germany, Greece, Hungary, India, Indonesia, the Islamic Republic of Iran, Mexico, Morocco, the Netherlands, Nicaragua, Nigeria, Pakistan, Peru, the Republic of Korea, Romania, the Russian Federation, Spain, Sweden, Turkey, Ukraine, the United Kingdom of Great Britain and Northern Ireland and the United States of America (see A/AC.105/PV.393-397).

16. The representatives of ASE, COSPAR, ESA, IAF and ILA, as well as the Expert on Space Applications of the Office for Outer Space Affairs, also made statements (see A/AC.105/PV.395-398). The representative of INTERSPUTNIK gave a special presentation on the status and future of that organization (see A/AC.105/PV.394).

17. At the 404th meeting, a statement was made by the Chairman of the Group of 77 expressing the Group's views on matters concerning a possible holding of a third UNISPACE conference, enlargement of membership in the Committee, and working methods of the Committee and its subsidiary bodies, which was noted by the Committee (see A/AC.105/PV.404).

18. After considering the various items before it, the Committee, at its 405th meeting, on 16 June 1994, adopted its report to the General Assembly containing the recommendations and decisions set out below.

II. RECOMMENDATIONS AND DECISIONS

A. Ways and means of maintaining outer space for peaceful purposes (agenda item 4)

19. In accordance with paragraph 37 of General Assembly resolution 48/39 of 10 December 1993, the Committee on the Peaceful Uses of Outer Space continued its consideration, as a matter of priority, of ways and means of maintaining outer space for peaceful purposes.

20. The Committee was of the view that the request of the General Assembly, in its resolution 48/39, to the Committee to continue to consider, as a matter of priority, ways and means of maintaining outer space for peaceful purposes, and to report thereon to the Assembly at its forty-ninth session, showed the concern felt by the international community and the need to promote international cooperation in the peaceful uses of outer space, taking into account the needs of developing countries. The Committee, through its work in the scientific, technical and legal fields, had an important role to play in ensuring that outer space was maintained for peaceful purposes. It was the firm belief of the members of the Committee that developments that would strengthen the role of the Committee in maintaining outer space for peaceful purposes should continue. The Committee had responsibilities relating to the strengthening of the international basis for the peaceful exploration and uses of outer space, which could cover, among other matters, further development of international space law, including, as appropriate, the preparation of international agreements governing various practical peaceful applications of space science and technology. Strengthening international cooperation in the peaceful exploration and use of outer space also implied the need for the Committee itself to improve, whenever necessary, the methods and forms of its work.

21. The Committee agreed that a good way to broaden and deepen international cooperation in outer space was through international and regional programmes undertaken as part of International Space Year and various follow-up activities that had been undertaken, particularly by the Space Agency Forum, as well as other regional activities. It also recognized the contribution of the First Asia-Pacific Conference on Multilateral Cooperation in Space Technology and Applications, held at Bangkok from 14 to 18 January 1994, and expressed the view that it constituted an important vehicle for promoting international cooperation in outer space. The Committee took note of the recommendations of that Conference, contained in document A/AC.105/L.204.

22. While recognizing the competence of the Conference on Disarmament on questions relating to the prevention of an arms race in outer space, some delegations expressed the view that the Committee should complement and contribute to the work being done in the Conference and in the First Committee of the General Assembly, considering that the peaceful and non-peaceful uses of outer space were inseparably linked and that the scope of that priority agenda item included such subjects as transparency and confidence-building measures and that proposals had been made to the Conference on Disarmament concerning the use of nuclear power sources in outer space and space debris, topics that were also being considered by the Committee. Those delegations expressed the view that the Committee should therefore be kept informed of the progress made by the Conference on such questions and that working contacts should be established between the two bodies. Other delegations expressed the view that the Committee had been created 35 years ago to address international cooperation in the peaceful uses of outer space, with a clear separation between its role and that

of other United Nations forums dealing with disarmament, and that contacts between the Committee and disarmament bodies would be inappropriate. Those delegations expressed the view that the Committee should contribute to maintaining outer space for peaceful purposes by strengthening the scientific and technical content of its work, by promoting broader and deeper international cooperation between all countries in outer space activities and by revitalizing its work and that of its subcommittees.

23. The Committee took note with satisfaction of the report of the Secretary-General (A/48/221) on international cooperation in space activities for enhancing security in the post-cold war era and the report by the Secretary-General (A/48/305 and Corr.1) on the study on the application of confidence-building measures in outer space, prepared with the assistance of a group of government experts.

24. The view was expressed that the Committee, in considering agenda item 4, should focus on improving international cooperation in the use of space technology for disaster warning and relief services and for search and rescue services, as well as seeking ways to strengthen regional cooperation, bearing in mind the useful results of the two Space Conferences of the Americas hosted by the Government of Costa Rica in 1990 and the Government of Chile in 1993.

B. Report of the Scientific and Technical Subcommittee on the work of its thirty-first session (agenda item 5) and implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (agenda item 7)

25. The Committee considered jointly agenda item 5, entitled "Report of the Scientific and Technical Subcommittee on the work of its thirty-first session", and agenda item 7, entitled "Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space".

1. Report of the Scientific and Technical Subcommittee on the work of its thirty-first session

26. The Committee took note with appreciation of the report of the Scientific and Technical Subcommittee on the work of its thirty-first session (A/AC.105/571), covering the results of its deliberations on the items assigned to it by the General Assembly in its resolution 48/39.

2. Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space

(a) Working Group of the Whole to Evaluate the Implementation of the Recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space

27. The Committee noted with satisfaction that, in accordance with General Assembly resolution 48/39, the Subcommittee had given priority consideration to its agenda item on the implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82), 1/ and had re-established, under the chairmanship of

Muhammed Nasim Shah (Pakistan), the Working Group of the Whole to Evaluate the Implementation of the Recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

28. The Committee noted with satisfaction that a number of reports related to the recommendations of UNISPACE 82 had been prepared in accordance with the recommendations of the Working Group of the Whole at its seventh session in 1993 (A/AC.105/543, annex II), which had been endorsed by the General Assembly in paragraph 13 of its resolution 48/39. The Committee also noted that further studies and reports would be prepared in accordance with the recommendations of the Working Group of the Whole at its eighth session, held in 1994.

29. The Committee noted that the Working Group of the Whole had reviewed the implementation of the recommendations of UNISPACE 82, had concluded that many of them had not been fully implemented and had made a number of recommendations concerning the further implementation of the recommendations of the Conference. The Committee endorsed the recommendations of the Working Group of the Whole at its eighth session, contained in the report of the Scientific and Technical Subcommittee on the work of its thirty-first session (A/AC.105/571, annex II). The Committee noted the view of the Working Group that the United Nations Programme on Space Applications should be given the full support of the United Nations in order to fully implement the recommendations of UNISPACE 82. That recommendation had been made on the understanding that the Office for Outer Space Affairs would give priority to the full implementation of the Programme within the available resources of its regular budget (A/AC.105/571, annex II, para. 19).

30. The Committee noted with appreciation that, following its recommendation to the General Assembly that it increase the budget allocation for the United Nations Programme on Space Applications so that the Programme would be able to more fully implement the recommendations of UNISPACE 82, the Assembly, at its forty-eighth session, had approved an additional budget allocation for the United Nations Programme on Space Applications for the biennium 1994-1995.

31. The Committee recommended that the Working Group of the Whole should be reconvened at the thirty-second session of the Scientific and Technical Subcommittee to continue its work.

32. The Committee, while expressing its appreciation to all Governments that had made or had expressed their intention of making contributions for the implementation of the recommendations of UNISPACE 82, took note of the disappointment expressed by representatives of developing countries at the lack of financial resources to implement those recommendations fully.

(b) United Nations Programme on Space Applications

33. At the outset of the deliberations of the Committee on this item, the Expert on Space Applications reviewed the activities carried out and planned under the United Nations Programme on Space Applications during the period 1993-1995. The Committee expressed its appreciation to the Expert on Space Applications for the effective manner in which he had implemented the Programme within the limited funds at his disposal.

34. The Committee continued to express its concern over the still limited financial resources available for carrying out the United Nations Programme on Space Applications and appealed to Member States to support the Programme through voluntary contributions. The Committee felt that the limited resources

of the United Nations should be focused on the highest priority activities and noted that the United Nations Programme on Space Applications was the priority activity of the Office for Outer Space Affairs.

35. The Committee took note of the activities of the United Nations Programme on Space Applications, as set out in the report of the Subcommittee (A/AC.105/571, paras. 23-33). The Committee was pleased to note that further progress was being made in the implementation of activities of the Programme planned for 1994.

(i) United Nations workshops, training courses and seminars

36. As regards the United Nations workshops, training courses and seminars for 1994, the Committee expressed its appreciation to the following:

(a) ESA and the Department for Development Support and Management Services of the Secretariat, for co-sponsoring the United Nations/ESA Training Course for Latin American and Caribbean Countries on the Monitoring of Natural Resources, Renewable Energy and Environment using the ERS-1 Satellite, held at Frascati, Italy, from 18 to 29 April 1994;

(b) The Government of Sweden, for co-sponsoring the Fourth United Nations/Sweden International Training Course on Remote Sensing Education for Educators, held at Stockholm and Kiruna from 2 May to 10 June 1994;

(c) The Government of Egypt, as well as ESA, for co-sponsoring the Fourth United Nations/ESA International Workshop on Basic Space Science, to be held at Cairo from 27 June to 1 July 1994;

(d) The Government of Germany, as well as COSPAR and the Committee on Science and Technology in Developing Countries (COSTED), for organizing the United Nations/COSPAR/Committee on Science and Technology in Developing Countries Symposium on Space Technology for Development, to be held at Hamburg, Germany, in July 1994;

(e) The Government of Austria, as well as ESA, for co-sponsoring the United Nations Workshop on Enhancing Social, Economic and Environmental Security through Space Technology, to be held at Graz, Austria, from 12 to 15 September 1994;

(f) The Government of China, as well as ESA, for co-sponsoring the United Nations/China/ESA Workshop in Microwave Remote Sensing Applications, to be held at Beijing from 14 to 18 September 1994;

(g) The Government of Peru, as well as ESA, for co-sponsoring the United Nations Regional Workshop on Global Change and Training Course on Remote Sensing Applications of Radar Technology to Environmental and Natural Resources Sciences, to be held at Lima from 3 to 14 October 1994;

(h) The Government of Israel, as well as ESA, IAF and the Commission of the European Communities (CEC), for co-sponsoring the United Nations/IAF Workshop on Space Activities for Economic Growth and Environmental Protection, to be held at Jerusalem from 6 to 9 October 1994.

37. The Committee endorsed the programme of United Nations workshops, training courses and seminars proposed for 1995, as outlined by the Expert on Space Applications in his report (A/AC.105/555, para. 62), and recommended those

activities for approval by the General Assembly. The Committee noted the plans for the following activities:

(a) The Fifth United Nations/Sweden International Training Course on Remote Sensing Education for Educators, to be hosted and co-sponsored by the Government of Sweden;

(b) A United Nations/ESA International Training Course on Microwave Remote Sensing for the benefit of Member States in the region of the Economic and Social Commission for Asia and the Pacific (ESCAP);

(c) A United Nations International Training Course on Communications Technology for Development;

(d) A United Nations/United States International Workshop on Spin-off Benefits of Space Technology: Challenges and Opportunities;

(e) A United Nations Workshop on the Use of Space Techniques for Monitoring and Control of the Desert Environment for the benefit of Member States in the region of the Economic and Social Commission for Western Asia (ESCWA);

(f) The Fifth United Nations/ESA Workshop on Basic Space Science, to be organized for Member States in the ESCAP region;

(g) The Second United Nations Regional Conference on Space Technology for Sustainable Development in the region of the Economic Commission for Africa (ECA);

(h) A United Nations Regional Conference on Space Technology for Sustainable Development in Latin America and the Caribbean;

(i) A United Nations/IAF Symposium on Space Technology in Developing Countries during the Forty-sixth Congress of IAF;

(j) A United Nations International Workshop on the Development and Design of Small Experimental Payloads.

38. The Committee also noted with appreciation financial contributions of 20,000 United States dollars (US$) from the Government of Austria, US$ 15,000 from the Government of Pakistan, US$ 85,000 from ESA, US$ 10,000 from the Earth Observation Satellite Corporation (United States) (EOSAT), 5,000 Canadian dollars from MacDonald Dettwiler (Canada), US$ 10,000 from Telespazio (Italy) and US$ 10,000 from the United States Geological Survey in support of the 1993 activities of the United Nations Programme on Space Applications, and contributions of US$ 20,000 from the Government of Austria, US$ 10,000 from the Government of Pakistan and US$ 95,000 from ESA in support of the 1994 activities. The Committee noted that other Member States were planning to make contributions. The Committee noted with appreciation the provision, by host countries and other countries, of experts as instructors and speakers in the activities of the United Nations Programme on Space Applications. The Committee also noted the financial and other assistance provided to the Programme by the Department for Development Support and Management Services, the Food and Agriculture Organization of the United Nations (FAO), the World Meteorological Organization (WMO), ITU, ESA, EOSAT, the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), the European Telecommunications Satellite Organization (EUTELSAT), the International Maritime

Satellite Organization (INMARSAT), the International Telecommunications Satellite Organization (INTELSAT), MacDonald Dettwiler, Telespazio and The Planetary Society. The Committee also expressed its appreciation to ESA for its donation of 30 personal computer systems to universities and research institutes in six developing countries.

(ii) Long-range fellowships for in-depth training

39. The Committee expressed its appreciation to the Governments of Brazil and China, as well as to ESA, for offering fellowships through the United Nations in the period 1993-1994 and for renewing their offers of fellowships for the period 1994-1995.

(iii) Technical advisory services

40. The Committee noted that the Programme had provided or would provide the following technical advisory services: to the Government of Ecuador, in studying the feasibility of establishing a multinational enterprise to operate the satellite ground receiving station at Cotopaxi, Ecuador; to the Government of Chile, in following up, as pro tempore secretariat, the recommendations of the Second Space Conference of the Americas; and to the Government of the Republic of Korea, in establishing the Asia-Pacific Satellite Communications Conference.

41. The Committee also noted that the Programme was continuing its collaboration with ESA in following up the United Nations/ESA International Space Year activity on the use of remote-sensing data being provided by ESA to four African countries covered by the receiving stations at Maspalomas, Spain, and Fucino, Italy. The Committee further noted that the Programme was collaborating with ESA in reviewing the training needs of the participating African institutions.

(iv) Centres for space science and technology education

42. The Committee noted with satisfaction that a number of Member States in the regions of ESCAP, the Economic Commission for Latin America and the Caribbean (ECLAC), ECA and ESCWA had expressed interest in hosting the proposed regional centres for space science and technology education, based on existing national or regional educational institutions in developing countries, to promote the development of indigenous capabilities. The Committee welcomed the information on that subject contained in the report of the Expert on Space Applications (A/AC.105/555, paras. 3-15) and requested Member States to consider providing voluntary contributions to support that effort.

43. The Committee took note of offers by Greece and Romania to host a regional centre for space science and technology education in the region of the Economic Commission for Europe, should the establishment of a centre in that region be mandated.

44. The Committee noted that evaluation missions to the regions of ESCAP and ESCWA were undertaken during the period 1993-1994 with the participation of technical experts from Australia, France, ESCAP, ESCWA and the Office for Outer Space Affairs, together with outside consultants. The Committee also noted the statement of the Expert on Space Applications concerning the arrangements for the regions that were under discussion between the Governments of the countries concerned and the United Nations. The Committee expressed its appreciation to

the Governments of Australia and France for having sent experts to participate in the evaluation mission to the ESCAP region.

45. The Committee noted that similar evaluation missions had previously been conducted to countries whose Governments had offered to host centres for space science and technology education in the regions of ECLAC and ECA and that discussions were under way on the establishment of centres in those regions.

46. The Committee noted with satisfaction that Brazil and Mexico, the countries selected by the United Nations to host the Centre for Space Science and Technology Education for the Latin American and Caribbean region, had recently concluded negotiations with a view to its establishment. The Committee further noted with satisfaction that the secretariat of the Centre would rotate every four years and would initially be located at the National Institute for Space Research (INPE) of Brazil and have a Secretary-General of Mexican nationality.

(v) Promotion of greater cooperation in space science and technology

47. Regarding the promotion of greater cooperation in space science and technology, the Committee noted with satisfaction that the United Nations Programme on Space Applications was co-sponsoring the following activities:

(a) A workshop entitled "Enhancing Social, Economic and Environmental Security through Space Technology", co-sponsored by ESA, the Government of Austria and the City of Graz, to be held at Graz, Austria, in 1994;

(b) A symposium entitled "Benefits of Space Technology for the Developing World - From Economic Growth to Environmental Protection", co-sponsored by IAF, ESA and CEC, to be held prior to the IAF Congress at Jerusalem in 1994;

(c) A conference in conjunction with the meeting of the Sociedad de Especialistas Latinoamericanos en Percepción Remota (SELPER) in 1995;

(d) Symposia and workshops in conjunction with the COSPAR meetings to be held in 1994 and the ISPRS meetings to be held in 1996.

(c) International space information service

48. With regard to the international space information service, the Committee noted with satisfaction the publication of the fifth volume of "Seminars of the United Nations Programme on Space Applications: Selected Papers on Remote Sensing, Satellite Communications and Space Science" (A/AC.105/568), containing selected papers from the seminars, workshops and training courses of the 1993 activities of the United Nations Programme on Space Applications; "Highlights in Space: Progress in Space Science, Technology and Applications, International Cooperation and Space Law" (A/AC.105/566), based on annual reports prepared by COSPAR and IAF, including for the first time a submission by the International Institute of Space Law, and submitted to the Scientific and Technical Subcommittee; and an updated edition of a directory on education, training, research and fellowship opportunities in space science and technology and its applications (A/AC.105/548).

(d) Coordination of space activities within the United Nations system and inter-agency cooperation

49. With regard to coordination of outer space activities within the United Nations system and inter-agency cooperation, the Committee noted the request of

the General Assembly, contained in its resolution 48/39, to all organs, organizations and bodies of the United Nations system to cooperate in the implementation of the recommendations of UNISPACE 82.

50. The Committee further noted with appreciation that the Scientific and Technical Subcommittee, at its thirty-first session, had continued to stress the necessity of ensuring continuous and effective consultations and coordination in the field of outer space activities among organizations within the United Nations system (A/AC.105/571, para. 39). The Committee noted with satisfaction that the fifteenth Ad Hoc Inter-Agency Meeting on Outer Space Activities had been held at Geneva from 11 to 13 October 1993 (A/AC.105/554) and that a report on coordination of outer space activities within the United Nations system had been submitted to the Scientific and Technical Subcommittee (A/AC.105/551). The Committee also noted with appreciation that the sixteenth Inter-Agency Meeting on Outer Space Activities would be held in October 1994 at the United Nations Office at Vienna.

51. The Committee noted with appreciation that representatives of United Nations bodies, the specialized agencies and other international organizations had participated in all stages of its work and of that of the Subcommittee. The Committee found that the reports submitted by those bodies helped to enable it and its subsidiary bodies to fulfil their role as a focal point for international cooperation in space, especially with respect to the practical applications of space science and technology in developing countries.

(e) Regional and interregional cooperation mechanisms

52. Regarding regional and interregional cooperation mechanisms, the Committee noted with satisfaction that, pursuant to General Assembly resolution 48/39, paragraph 17, and the recommendations of UNISPACE 82, the Secretariat had continued to seek to strengthen regional mechanisms of cooperation by organizing regional workshops and training courses as part of the United Nations Programme on Space Applications and by providing technical assistance to regional activities in Africa, Latin America and the Caribbean, and the Asia-Pacific region, as well as by promoting the establishment of regional centres for space science and technology education.

53. The Committee noted the contributions made by other international organizations towards the implementation of the recommendations of UNISPACE 82. In particular, the Committee noted that FAO was continuing its activities relating to remote sensing of renewable natural resources and environmental monitoring, including training courses and support of development projects; ITU was continuing its work on the international coordination of space communications and providing technical assistance to developing countries; WMO was continuing international cooperative programmes using space technologies, including the World Weather Watch Programme and the Tropical Cyclone Programme; UNESCO was promoting applications of space technology for archaeology and strengthening cooperation between archaeological projects; UNIDO was continuing its work on spin-off benefits of space technology; INTELSAT was further developing its system for international satellite communications and broadcasting and providing assistance to developing countries in using the system; INMARSAT was continuing to develop its satellite communications system for maritime, aeronautical and land-mobile communications; COSPAR, IAF, ILA and ISPRS were continuing to promote international cooperation and exchange of information relating to space activities; and ESA was continuing its programme of international cooperative space activities including training programmes for

the benefit of developing countries, support of the activities of the United Nations Programme on Space Applications and technical assistance programmes.

54. The Committee noted the preparations under way for the Ministerial Conference on Space Applications for Development in the Asia-Pacific Region, to be held in Beijing in September 1994 under the auspices of ESCAP, and agreed that such activities contributed to the promotion of regional cooperation in space activities. The Committee also recognized the contribution of the Second Space Conference of the Americas, held at Santiago in 1993 at which the Santiago Declaration was adopted (A/48/20, annex), and expressed the view that it constituted an important instrument in the promotion of international cooperation in outer space.

3. Matters relating to remote sensing of the Earth by satellites, including, inter alia, applications for developing countries

55. The Committee noted that, in accordance with General Assembly resolution 48/39, the Subcommittee had given priority consideration to matters relating to remote sensing of the Earth by satellites.

56. The Committee recognized the importance of ongoing international efforts to ensure the continuity, compatibility and complementarity of systems for remote sensing of the Earth and to promote cooperation through regular meetings between satellite operators, ground-station operators and users. The Committee also noted the value of remote-sensing systems for environmental monitoring and stressed the need for the international community to utilize remote-sensing data in an effort to implement fully the recommendations contained in Agenda 21 (A/CONF.151/26/Rev.1) of the United Nations Conference on Environment and Development, held at Rio de Janeiro, Brazil, from 3 to 14 June 1992.

57. The Committee recognized the example of international cooperation given by the free distribution of meteorological information. All countries and agencies were urged to continue that practice. Some delegations also urged that similar arrangements and modalities should be made for the distribution of other remote-sensing information.

58. Some representatives expressed concern over the commercialization of remote-sensing activities and suggested that the prices of remote-sensing data products and access fees for data reception should be reduced significantly in order to make them affordable to developing countries and to enable such countries to benefit fully from the use of remote-sensing technology.

59. The Committee noted that the Subcommittee at its thirty-first session, recalling General Assembly resolution 41/65 of 3 December 1986, by which the Assembly adopted the Principles Relating to Remote Sensing of the Earth from Outer Space, had recommended continuing, at its thirty-second session, its discussion on remote-sensing activities conducted in accordance with those Principles (A/AC.105/571, para. 51). The Committee endorsed that recommendation.

60. The Committee took note that the plenary meeting of the Committee on Earth Observation Satellites (CEOS) would take place in Berlin, Germany, from 26 to 28 September 1994 together with the celebration of its 10-year anniversary.

61. The Committee also endorsed the recommendation of the Subcommittee that the item should be retained on the agenda of the Subcommittee as a priority item for its thirty-second session (A/AC.105/571, para. 52).

4. Use of nuclear power sources in outer space

62. The Committee noted that, in accordance with General Assembly resolution 48/39, the Scientific and Technical Subcommittee had reconvened the Working Group on the Use of Nuclear Power Sources in Outer Space to enable it to resume its work.

63. The Committee recalled that the General Assembly had adopted Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as contained in resolution 47/68 of 14 December 1992. The Committee also noted that in Principle 11 on "review and revision", it was stated that the Principles should be reopened for revision by the Committee no later than two years after their adoption.

64. The Committee noted that the Subcommittee had considered the subject and had adopted the report of the Working Group on the Use of Nuclear Power Sources in Outer Space (A/AC.105/571, para. 56), contained in annex III to the report of the Subcommittee.

65. The Committee noted that the General Assembly, in its resolution 48/39, paragraph 14, had invited Member States to report to the Secretary-General on a regular basis with regard to national and international research concerning the safety of nuclear-powered satellites. The Committee expressed its appreciation to those Member States that had submitted such information.

66. The Committee agreed with the Scientific and Technical Subcommittee that Member States should continue to be invited to report to the Secretary-General on a regular basis with regard to national and international research concerning the safety of orbiting space objects with nuclear power sources on board and that additional studies should be conducted on the issue of the collision of orbiting space objects with nuclear power sources on board with space debris and that the Subcommittee should be kept informed of the results of such studies (A/AC.105/571, para. 58).

67. The Committee noted that a working paper on revising the Principles Relevant to the Use of Nuclear Power Sources in Outer Space (A/AC.105/C.1/L.192) had been submitted to the Subcommittee by the United Kingdom, a working paper on nuclear power sources in outer space and space debris (A/AC.105/C.1/L.193) had been submitted by the Russian Federation and a paper on the use of nuclear power sources in outer space (A/AC.105/C.1/L.197) had been submitted by Sweden.

68. The Committee agreed that the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, as adopted in General Assembly resolution 47/68, should remain in their current form until amended and that before amendment, proper consideration should be given to the aims and objectives of any proposed revision.

69. The Committee endorsed the recommendation of the Subcommittee that the item should be retained on the agenda for the thirty-second session of the Subcommittee and that the time allocated to the topic in both the Subcommittee and the Working Group should be adjusted as appropriate (A/AC.105/571,

para. 62), taking into consideration that no initiative for a revision of the Principles has been taken so far.

5. Space debris

70. The Committee noted that, in accordance with General Assembly resolution 48/39, the Scientific and Technical Subcommittee began its consideration of space debris as a new item on its agenda and considered scientific research related to space debris, including relevant studies, mathematical modelling and other analytical work on the characterization of the debris environment.

71. The Committee expressed its satisfaction at having the subject of space debris as a separate item on the agenda of the Scientific and Technical Subcommittee after many years of discussion in various international forums, including the Committee and the Subcommittee. The Committee agreed that consideration of space debris was important and that international cooperation was needed to evolve appropriate and affordable strategies to minimize the potential impact of space debris on future space missions.

72. The Committee agreed that, in accordance with General Assembly resolution 48/39, paragraph 27, it was essential that Member States pay more attention to possible collisions of orbiting space objects, including those with nuclear power sources on board, with space debris, and other aspects related to space debris. The Committee noted that the General Assembly, in the same resolution, had called for, among other things, the continuation of national research on that question.

73. The Committee agreed that there was a need for further research concerning space debris, for the development of improved technology for the monitoring of space debris and for the compilation and dissemination of data on space debris. The Committee also noted the importance of international cooperation in addressing those issues.

74. The Committee agreed that national research on space debris should continue and that Member States should make the results of that research available to all interested parties. In that connection, the Committee took note of the information on national research (A/AC.105/565, Corr.1 and Add.1, 2 and 3) submitted by Member States pursuant to a request of the Secretary-General.

75. The Committee also took note of the working paper on space debris submitted to the Scientific and Technical Subcommittee by the Russian Federation (A/AC.105/C.1/L.193), the report of the IAF on space debris (A/AC.105/570) and the scientific and technical presentations on the subject of space debris made to the Subcommittee by France, Germany, India, the United Kingdom, the United States and ESA.

76. The Committee agreed with the Subcommittee that it was important to have a firm scientific and technical basis for future action on the complex attributes of space debris and that the Subcommittee should, inter alia, focus on understanding aspects of research related to space debris including: debris measurement techniques; mathematical modelling of the debris environment; characterizing the space debris environment; and spacecraft design measures to protect against space debris (A/AC.105/571, para. 69).

77. The Committee agreed with the Subcommittee that, in order to give structure to its consideration of the agenda item on space debris, the Subcommittee should

focus its attention at its next session on the subject of acquisition and understanding of data on the characteristics of the space debris environment, with a view to establishing a common understanding that could serve as the basis for its further deliberations. The Committee also agreed that, to that end, COSPAR and IAF, as well as other relevant international organizations should be invited to present relevant research to the Subcommittee and that Member States and relevant international organizations should be encouraged to provide information on practices that they had adopted and that had proved effective in minimizing the creation of space debris (A/AC.105/571, para. 70).

78. The Committee agreed that the Subcommittee should, at its next session, develop a continuing, deliberate, specific multi-year plan for its work on the agenda item on space debris and that, notwithstanding the selection of a specific subject for discussion at the next session of the Subcommittee, Member States should be free to address the Subcommittee on other aspects of scientific research related to space debris.

79. Some delegations expressed the view that the Committee should set a deadline for the Subcommittee to conclude its discussions on scientific and technical matters related to space debris and to report all its findings to the Committee to facilitate the debate on the matter within the Committee. The view was expressed that the deadline for that report might be set at the fortieth session of the Committee in 1997.

80. The view was expressed that it was important for the Committee and the Subcommittee to have a common understanding of the term "space debris". It was proposed that the Subcommittee adopt the following explanation of the term: Space debris are all man-made objects in Earth orbit or re-entering the dense layers of the atmosphere which are non-functional with no reasonable expectation of assuming or resuming their intended functions or any other functions for which they are or can be authorized, including their fragments and parts. Some delegations also expressed the view that establishing such a definition was inappropriate as the subject of space debris had just been taken up by the Scientific and Technical Subcommittee at its 1994 session.

81. Some delegations expressed the view that the Committee should recommend that all satellites in the geostationary orbit should be removed from that orbit at the end of their operational lifetimes.

82. The Committee agreed that the Subcommittee should continue consideration of the item at its next session.

6. Space transportation systems

83. The Committee noted that, in accordance with General Assembly resolution 48/39, the Subcommittee had continued consideration of the item relating to space transportation systems and their implications for future activities in space.

84. The Committee took note of the progress being achieved in the various programmes in operation or planned by China, India, Japan, the Russian Federation, Ukraine, the United Kingdom, the United States and ESA.

85. The Committee took note of developments in low-cost microsatellite technology and applications that could allow more countries to take an active part in space activities.

86. The Committee stressed the importance of international cooperation in space transportation in order to provide all countries with access to the benefits of space science and technology.

87. The Committee endorsed the recommendation of the Subcommittee to continue consideration of the item at its next session.

7. Examination of the physical nature and technical attributes of the geostationary orbit; examination of its utilization and applications, including, inter alia, in the field of space communications, as well as other questions relating to space communications developments, taking particular account of the needs and interests of developing countries

88. The Committee noted that, in accordance with General Assembly resolution 48/39, the Subcommittee had continued consideration of the item relating to the geostationary orbit and space communications.

89. The Committee noted that delegations had reiterated and elaborated on the views concerning the question of the geostationary orbit that had been expressed at earlier sessions and had been reflected in earlier reports of the Committee and its two subcommittees.

90. The Committee expressed its appreciation to ITU for submitting its thirty-third annual progress report on telecommunication and the peaceful uses of outer space. Some delegations, in their statements, stressed the important technical scope of the work of ITU, while drawing attention to the competence of the Committee in preparing policy decisions and the legal status of the geostationary orbit.

91. The Committee endorsed the recommendation of the Subcommittee that it should continue consideration of the item at its next session.

8. Matters relating to life sciences, including space medicine; progress in national and international space activities related to the Earth environment, in particular progress in the geosphere-biosphere (global change) programme; matters relating to planetary exploration; and matters relating to astronomy

92. The Committee noted that, in accordance with General Assembly resolution 48/39, the Subcommittee had continued to consider the items concerning matters relating to life sciences, including space medicine; progress in national and international space activities related to the Earth environment, in particular progress in the International Geosphere-Biosphere (Global Change) Programme; matters relating to planetary exploration; and matters relating to astronomy.

93. The Committee noted with satisfaction the wide variety of space activities being undertaken in those areas and the extensive international cooperation in those activities. The Committee encouraged further cooperation in those areas and, in particular, further efforts to increase the participation of developing countries.

94. The Committee agreed that it could make an important contribution in the area of environment and development by promoting international cooperation in

the applications of space technologies for environmental monitoring and sustainable development. In particular, the Committee agreed that the Programme on Space Applications could play an important role in assisting developing countries in strengthening their capabilities in related space technologies and applications through its education, training and technical advisory activities.

95. The Committee noted that, at its request, the analytical report prepared by the Secretariat on the role that the Committee could play in view of the decisions and recommendations of the United Nations Conference on Environment and Development (A/AC.105/547) had been submitted to the Commission on Sustainable Development to facilitate interaction between the Commission and other intergovernmental United Nations bodies dealing with matters related to environment and development. The Committee agreed to further request the Commission on Sustainable Development to bring to the notice of its members the useful role of space technology and its applications in assisting sustainable development.

96. The Committee noted that, pursuant to its request, the Scientific and Technical Subcommittee had reviewed the report prepared by the Secretariat and had considered further how the Committee might best promote the effective use of space technology, on the basis of international cooperation, for environmental monitoring and sustainable development. The Committee also noted that, pursuant to its request and to assist the Scientific and Technical Subcommittee, the Secretariat had provided the Subcommittee with updated information on the implementation of Agenda 21 by the United Nations system, with information on activities of the United Nations Programme on Space Applications related to environment and development, and with suggestions on how the activities of the Programme in that area might be expanded (A/AC.105/547/Add.1).

97. The Committee agreed that the two above-mentioned documents could form the basis for future discussions on the matter within the Committee and the Subcommittee.

98. The Committee endorsed the recommendation of the Subcommittee to continue consideration of the item at its next session.

9. Themes fixed for special attention at the thirty-first and thirty-second sessions of the Scientific and Technical Subcommittee

99. The Committee noted that, in accordance with General Assembly resolution 48/39, the Subcommittee had considered the theme fixed for special attention at the thirty-first session of the Scientific and Technical Subcommittee in 1994: "Space applications for disaster prevention, warning, mitigation and relief".

100. The Committee noted with satisfaction that, in accordance with General Assembly resolution 48/39, COSPAR and IAF had conducted a symposium on the theme. The Committee expressed its appreciation to COSPAR and IAF for their generous support of the work of the Subcommittee.

101. The Committee endorsed the recommendation of the Subcommittee that the new theme fixed for special attention at the thirty-second session of the Subcommittee, in 1995, should be "Application of space technology for education, with particular emphasis on its use in developing countries". It also endorsed the recommendation of the Subcommittee that COSPAR and IAF, in liaison with Member States, should be invited to arrange a symposium on that theme, with as

wide a participation as possible, to be held during the first week of the thirty-second session of the Subcommittee, in order to complement discussions within the Subcommittee on the special theme.

102. The Committee expressed its appreciation for the summary of the scientific and technical presentations made during the thirty-first session of the Scientific and Technical Subcommittee (A/AC.105/574).

103. Some delegations, while recognizing the significance of the scientific and technical presentations to the Subcommittee, expressed the view that, as an intergovernmental forum, the Subcommittee should give priority to discussing policies and guidelines for international cooperation in space activities and providing agreed technical parameters for the progressive development of international space law.

C. Report of the Legal Subcommittee on the work of its thirty-third session (agenda item 6)

104. The Committee took note with appreciation of the report of the Legal Subcommittee on the work of its thirty-third session (A/AC.105/573), which contained the results of its deliberations on the items assigned to it by the General Assembly in its resolution 48/39.

1. Question of early review and possible revision of the principles relevant to the use of nuclear power sources in outer space

105. The Committee recalled that in principle 11 of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, adopted by the General Assembly in its resolution 47/68, it was stated that the Principles should be reopened for revision by the Committee no later than two years after their adoption.

106. The Committee noted that, in accordance with General Assembly resolutions 47/68 and 48/39, the Legal Subcommittee, through its Working Group on agenda item 3, under the chairmanship of Franz Cede (Austria), had considered the question of early review and possible revision of the Principles.

107. The Committee noted the work carried out by the Legal Subcommittee and the Working Group, as reflected in their reports (A/AC.105/573, paras. 23-30, and annex I).

108. The Committee agreed that the Principles as adopted in General Assembly resolution 47/68 would remain valid until such time as they were amended and that the Scientific and Technical Subcommittee should consider the need for revision in the light of changing technology before the Legal Subcommittee or the Committee undertook any actual revision.

109. Some delegations expressed the view that any future review and revision of the Principles should have the goal of further strengthening the level of safety provided by the Principles. The view was also expressed that any review and revision should also have the goal of bringing the Principles into conformity with existing and future international standards on the safe use of nuclear power sources in outer space.

110. The Committee agreed with the Legal Subcommittee (A/AC.105/573, paras. 17 and 30) and the Working Group (A/AC.105/573, annex I, para. 9) that

consideration of the Principles by the Working Group should be suspended for one year, pending the results of the work in the Scientific and Technical Subcommittee, without prejudice to the possibility of reconvening the Working Group on that item if, in the opinion of the Legal Subcommittee, sufficient progress was made in the Scientific and Technical Subcommittee at its session in 1995 to warrant the reconvening of the Working Group by the Legal Subcommittee. The Committee endorsed the recommendation that the item concerning nuclear power sources should be retained on the agenda of the Legal Subcommittee to give delegations an opportunity to discuss that item in plenary meetings (A/AC.105/573, annex I, para. 9).

2. Matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union

111. The Committee noted that, in accordance with General Assembly resolution 48/39, the Legal Subcommittee, through its Working Group on agenda item 4, under the chairmanship of E. Zawels (Argentina), had continued to consider matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit.

112. The Committee noted the work carried out by the Legal Subcommittee and the Working Group, as reflected in their reports (A/AC.105/573, paras. 31-37, and annex II).

113. The Committee noted that a variety of views had been expressed on the question of the definition and delimitation of outer space. Those views were elaborated on and reiterated during the current session of the Committee.

114. Some delegations reiterated the view that a conventionally defined boundary between airspace and outer space was needed and that the Legal Subcommittee should continue to consider the question, with a view to establishing such a boundary. Others reiterated the view that the need for such a definition or delimitation had not yet been established and that attempts to establish prematurely a boundary between airspace and outer space might complicate and impede progress in the peaceful exploration and use of outer space. The view was also expressed that after 35 years of discussion about the definition and delimitation of outer space, a choice should be made for either a functional or a spatial approach or that it should be decided to let the whole question rest for the time being.

115. The Committee noted that a draft questionnaire concerning aerospace objects had been discussed by the Working Group on the basis of an informal paper submitted by its Chairman to the Legal Subcommittee at its thirty-second session, in 1993, and that suggestions had been made for submitting the questionnaire for comments to Member States, to the International Civil Aviation Organization and to the Scientific and Technical Subcommittee. The Committee also noted that at the 1994 session of the Legal Subcommittee, the Working Group considered an informal paper (A/AC.105/573, annex II, para. 14) submitted by its Chairman that contained an introduction to the draft questionnaire. The informal paper had been prepared in consultation with a number of delegations and was intended to explain the origins and objectives of the draft questionnaire. The Committee agreed that that document, among others, could form a suitable basis for future discussions.

116. The Committee took note of the deliberations on the question of the geostationary orbit as contained in the report of the Legal Subcommittee. The Committee noted that an exchange of views had taken place on that subject, particularly on the basis of the ideas formulated in the working paper (A/AC.105/C.2/L.192) submitted by Colombia to the Legal Subcommittee at its thirty-second session, in 1993 (see A/AC.105/573, annex IV/A). The Committee also noted that the exchange of views on the working paper had been productive and provided a good basis for future consideration of that item.

117. Some delegations stressed that the geostationary orbit was part of outer space and that its legal status was subject to all provisions of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (General Assembly resolution 2222 (XXI), annex, of 19 December 1966) and to the appropriate rules of ITU, which had the status of a treaty.

118. Some delegations reiterated the view that the geostationary orbit, because of its particular characteristics, required a special, sui generis, legal regime to regulate access and utilization by all States, taking into account the needs of developing countries. The view was also expressed that such a legal regime should also take into consideration the particular situation of the equatorial countries.

119. Some delegations reiterated the view that the roles of ITU and of the Legal Subcommittee were complementary and that the Subcommittee could contribute to the establishment of a special legal regime to regulate the use of the geostationary orbit. Others reiterated the view that ITU was the appropriate body to address questions concerning the use of the geostationary orbit and was addressing those questions effectively.

120. Some delegations expressed the view that since matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit were unrelated, those issues should be considered separately by the Legal Subcommittee. Others expressed the view that, due to the historic links between the two subjects, such separation would not be appropriate.

121. The Committee recognized that space debris was a cause for concern in the geostationary orbit as well as in lower orbits. Some delegations expressed the view that the subject of space debris should be added to the agenda of the Legal Subcommittee. Others were of the view that doing so would be premature as the subject had been taken up by the Scientific and Technical Subcommittee only at its most recent session.

122. The Committee recommended that the Legal Subcommittee should continue its consideration of the item at its thirty-fourth session, in 1995.

3. Consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries

123. The Committee noted that, in accordance with General Assembly resolution 48/39, the Legal Subcommittee, through its Working Group on item 5, under the chairmanship of R. González (Chile), had continued to consider the legal aspects

related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries.

124. The Committee noted the constructive work carried out by the Legal Subcommittee and the Working Group, as reflected in their reports (A/AC.105/573, paras. 38-45, and annex III).

125. The Committee took note with satisfaction of the useful and constructive discussion based on a working paper (A/AC.105/C.2/L.182/Rev.1) submitted to the Legal Subcommittee at its thirty-second session in 1993 (see A/AC.105/573, annex IV/B), as well as of the positive reaction of the co-sponsors to comments, including several substantive suggestions, made by other delegations during the discussions based on the working paper. The Committee noted the willingness of the co-sponsors to take those suggestions into account in future revisions of the working paper.

126. Some delegations expressed the view that it was essential to elaborate legal principles that would ensure that all countries could have access to, and benefit from, outer space activities. They felt that the draft principles on the subject contained in the working paper took into account those concerns, as well as the interests of both developed and developing countries.

127. Some delegations expressed the view that future legal principles relating to the item should address the existing inequalities between the technologically advanced space nations and the developing countries without the infrastructure, resources and technological capability to benefit from space exploration and utilization. They felt that those principles should emphasize the development of indigenous space capabilities, particularly in developing countries, in addition to ensuring access to space resources and technology and the widest possible diffusion of the benefits of space activities among the peoples of the world.

128. Some delegations expressed the view that there was currently no need to elaborate principles such as those proposed in the working paper because, in their view, there was sufficient international cooperation in the peaceful uses of outer space and such principles would limit the sovereign right of a State to choose with whom, and in what form, it could conduct cooperative activities, and would also limit the extent of ongoing cooperation.

129. Other delegations expressed the view that the principles outlined in the working paper ensured the sovereign rights of States with regard to their cooperative space activities and were intended solely to facilitate further international cooperation in the peaceful uses of outer space and to provide guidelines for such cooperation.

130. Some delegations expressed the view that developing countries should develop a model based on practical aspects and existing conditions, explaining how they might better participate and cooperate in outer space activities, including their views on, inter alia, desired services, access to benefits, financing and technology transfer.

131. The view was expressed that the concept of the common heritage of mankind, as developed by the Third United Nations Conference on the Law of the Sea, could not serve as a basis for discussions on matters relating to outer space benefits. The view was also expressed that the concept of the common heritage of mankind, among other things, of the Third United Nations Conference on the

Law of the Sea, could serve as a basis for discussions on outer space benefits and help to create an adequate regulatory regime.

132. The view was expressed that international cooperation in the exploration and peaceful uses of outer space should strive to allocate resources efficiently and that it should be based on the principles of international law, including the Charter of the United Nations and the Outer Space Treaty. In this regard, States should be free to determine all aspects of their cooperation on equitable and mutually agreeable terms and the most effective and appropriate modes of cooperation should be chosen on an ad hoc basis.

133. The Committee recommended that the Legal Subcommittee should continue the consideration of the item at its thirty-fourth session, in 1995.

D. Spin-off benefits of space technology: review of current status (agenda item 8)

134. In accordance with General Assembly resolution 48/39, paragraph 38, the Committee took up the consideration of spin-off benefits of outer space.

135. The Committee agreed that spin-offs of space technology were yielding substantial benefits in many fields. It noted that spin-offs of space technology were providing, among other things, new techniques for the field of industrial measurement and control, image and data processing, medical techniques, computer systems, robotics, power generation, special materials and chemicals, water treatment and refrigeration.

136. The Committee noted that the importance of spin-off benefits was growing rapidly. It also noted the importance of international cooperation in developing spin-off benefits of space technology and in ensuring that all countries, in particular developing countries, had access to those benefits.

137. The Committee noted that the conversion of military industries to productive civilian uses would facilitate the transfer and use of space technologies and their spin-off benefits. The Committee also noted that efforts were under way in some Member States to use space technologies for that purpose.

138. The Committee agreed that there was a need to examine ways to strengthen and enhance international cooperation in the field of spin-off benefits of space technology, through, inter alia, improved means of providing access to spin-offs for all countries, giving particular attention to those spin-offs that could address the social and economic needs of developing countries.

139. Some delegations expressed the view that the United Nations could contribute to the development of improved procedures for disseminating spin-off benefits. The view was expressed that there was a need to consider the establishment of a coordinating body to serve as a centre for the collection of information related to the spin-off benefits of space technology and for the dissemination of such information, particularly to the international scientific and industrial communities, in order to expand the scope of utilization of those benefits.

140. The Committee reiterated the recommendation made at its thirty-sixth session, in 1993, 2/ that the Programme should consider devoting at least one of its training courses, seminars or expert meetings each year to the promotion of spin-off benefits from space. The Committee expressed its satisfaction that,

pursuant to that recommendation, the United Nations Programme on Space Applications was planning to hold, in 1995, the United Nations/United States International Workshop on Spin-off Benefits of Space Technology: Challenges and Opportunities.

141. The Committee recommended that it continue its consideration of the item at its thirty-eighth session, in 1995.

E. Other matters

1. Reports to the Committee

142. The Committee noted with appreciation the participation in its work and in that of its subcommittees of representatives of FAO, UNESCO, ITU, WMO, UNIDO, IAEA, ESA, INTELSAT, INTERSPUTNIK, COSPAR, IAF, ILA and ISPRS. The Committee expressed its appreciation to those organizations that had submitted reports on their activities and requested interested organizations to continue to keep it informed of their activities relating to the peaceful uses of outer space.

143. The Committee recommended that the Secretariat should invite Member States to submit annual reports on their space activities. In addition to information on national and international space programmes, the reports could include information in response to requests from the Working Group of the Whole, as well as information on spin-off benefits of space activities and other topics as requested by the Committee and its subsidiary bodies.

2. Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space

144. The Committee noted that, in accordance with General Assembly resolution 48/39, the Scientific and Technical Subcommittee discussed the subject of a third UNISPACE conference at its thirty-first session in 1994 with a view to promoting an early conclusion on the matter by the Committee. The Committee also noted that the Assembly, in the same resolution, had agreed that the most important step is to define a set of sharply focused objectives for such a conference and that details such as organization, venue, timing and funding aspects should also be considered by the Subcommittee. The Committee recalled that the Assembly had noted that the goals set for such a conference might also be achieved through other means, including intensification of work within the Committee.

145. The Committee also noted that working papers on the possibility of holding a third UNISPACE conference had been submitted to the Scientific and Technical Subcommittee by Pakistan (A/AC.105/C.1/L.191), India (A/AC.105/C.1/L.195) and the Group of 77 (A/AC.105/C.1/L.199). The Committee noted with appreciation that, in accordance with the request of the Subcommittee, the Secretariat had prepared for its consideration a comprehensive report on the likely organization, funding and logistical implications of holding such a conference, including an analysis of UNISPACE 82, its organization and logistics, as well as an analysis of various combinations of duration, scope and venue for a third UNISPACE conference (A/AC.105/575).

146. The Committee further noted that the Subcommittee had agreed that the Committee should continue its discussions on all matters related to the holding of a third UNISPACE conference at its current session. Accordingly, the

Committee discussed matters related to the convening of a third UNISPACE conference.

147. On the basis of those discussions, the Committee agreed that a third UNISPACE conference could be convened in the near future, and also agreed that prior to recommending a date for such a conference, there should be a consensus recommendation on the agenda, venue and funding of the conference. The Committee therefore recommended that a very thorough analysis and definition of an agenda for a third UNISPACE conference should take place at the next session of the Scientific and Technical Subcommittee. In this connection, the Committee agreed that the Subcommittee discuss a broad range of themes and subjects which could be refined into a sharply focused and detailed agenda for a third UNISPACE conference, as well as, at the same time, continue its examination of other means of achieving the goals set for such a conference.

148. The Committee agreed that the working papers presented to the Scientific and Technical Subcommittee at its thirty-first session and the report prepared by the Secretariat, referred to in paragraph 145 above, as well as the informal non-paper circulated by the Chairman at the current session of the Committee, as well as those circulated by other interested delegations, provide some basis for the Subcommittee's further consideration of this matter. The Committee invited interested Member States to submit additional ideas and proposals for a third UNISPACE conference in time for their consideration at the next session of the Subcommittee. To facilitate further consideration of this matter, the Committee requested the Secretariat to compile a document, in time for consideration at the next session of the Scientific and Technical Subcommittee, containing the various ideas regarding the agenda and organization of a third UNISPACE conference submitted to the Committee.

149. The Committee agreed that the discussions in the Subcommittee should provide the basis for a prompt decision by the Committee on a recommendation to the General Assembly regarding the agenda, timing, funding and organization of a third UNISPACE conference.

3. The question of the review of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies

150. The Committee noted that article 18 of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (General Assembly resolution 34/68, annex, of 5 December 1979), which had entered into force on 11 July 1984, provided that 10 years after the entry into force of the Agreement, the question of its review should be included in the provisional agenda of the General Assembly so that the Assembly might consider, in the light of past application of the Agreement, whether it required revision.

151. The Committee also noted that the General Assembly, in its resolution 48/39, paragraph 2, had invited States that had not yet become parties to the international treaties governing the uses of outer space, including the Agreement, to consider ratifying or acceding to those treaties.

152. The view was expressed that, because the Agreement had so far only been ratified by nine Member States and had been signed by five others, any possible revision of its provisions should be conducted with prudence and only on the basis of consultations with all Member States.

153. The Committee recommended that the General Assembly, at its forty-ninth session, in considering whether to revise the Agreement, should take no further action at that time.

4. Membership of the Committee

154. The Committee recalled the proposals made by several regional groups at its thirty-sixth session concerning the interest of States in membership in the Committee. 3/ The Committee took note of the statement made by its Chairman to the Special Political and Decolonization Committee (Fourth Committee) (A/48/645, para. 9), in which he noted that he believed that there was agreement that a limited enlargement of the Committee on the Peaceful Uses of Outer Space, regionally balanced and based on proposals of the various regional groups, would be appropriate. The Committee noted that the Chairman had conducted extensive consultations with a view to arriving at a consensus recommendation on the new membership of the Committee at its present session.

155. In that connection, the Committee noted the formal requests for membership in the Committee that had been submitted to the President of the General Assembly by a number of Member States. The Committee also noted that several Member States that were permanent members of the Committee but shared their seats on a rotating basis with other permanent members of the Committee had requested that practice of rotation be ended.

156. With the requests for membership in mind, and after extensive consultations among Member States of the Committee, the Committee agreed with the proposal of the Chairman that its membership should be enlarged by not more than eight member States, that is, by not more than two seats for each of the regional groups that had indicated an interest. The Committee also agreed that, after consulting with the regional groups and the Chairman of the Committee and subject to the consensus of member States of the Committee, the President of the General Assembly should appoint the member States to be added to the Committee at the forty-ninth session of the Assembly.

157. The Committee was of the view that after the current enlargement of the Committee, there would be no need to further expand its membership in the near future; therefore the Committee agreed that no additional enlargement of the Committee should take place until a comprehensive assessment and thorough examination were conducted of the impact that the enlargement had on the efficiency of the Committee and that any further expansion of the membership of the Committee would be based on consensus of member States of the Committee.

5. Methods of work of the Committee and its subsidiary bodies

158. The Committee held an informal session to consider matters related to the working methods of the Committee and its subsidiary bodies and agreed to establish at its thirty-eighth session, in 1995, a Working Group of the Whole to examine the working methods of the Committee and its subsidiary bodies, taking into particular account the results and recommendations of the informal consultations discussed in paragraph 160 below.

159. The Committee noted the flexible measures regarding procedure adopted by the Legal Subcommittee at its thirty-third session, in 1994 (A/AC.105/573,

para. 12), and agreed that the work of the Committee and its subsidiary bodies should be conducted with maximum flexibility by their respective chairmen, with a view to concluding the sessions of those bodies as early as practicable, without prejudice to their giving full consideration to the items on their agendas.

160. The Committee recommended that the Chairman of the Legal Subcommittee at its thirty-fourth session, in 1995, should conduct extensive, open-ended informal consultations, with all members of the Subcommittee, on the working methods and agenda of the Legal Subcommittee, including the consideration of possible additional items for inclusion on the agenda. The Committee also recommended that the informal consultations of the Chairman of the Legal Subcommittee should consider the proposals contained in the annex to the present report, as well as any additional proposals that might be offered by members of the Subcommittee, and that he should include in the report of the Legal Subcommittee on the work of its thirty-fourth session the results and recommendations of those consultations.

161. The Committee agreed that the Secretariat should provide briefings for all interested Member States on issues to be discussed at sessions of the Committee and its subsidiary bodies and that full interpretation services should be provided at those briefings. Informal discussions on the work of the Committee and its subsidiary bodies might also be undertaken, as appropriate, after the conclusion of the sessions of those bodies.

162. Some delegations expressed criticisms with regard to the organization, functioning and methods of work of the Legal Subcommittee.

6. Records of the Committee

163. The Committee was informed that the Chairman of the Committee on Conferences, pursuant to General Assembly resolution 48/222 B of 23 December 1993, had requested the cooperation of those bodies currently entitled to written meeting records in reviewing the need for such records, particularly verbatim records. The Committee agreed that the Working Group to be established by the Committee at its thirty-eighth session, referred to in paragraph 158 above, should review possible alternatives to verbatim records, with a view to developing a recommendation on the matter. The Committee invited the Secretariat to provide information, in time for consideration at its thirty-eighth session, on alternatives to verbatim records that might be available to the Committee.

164. The view was expressed that there was a need for verbatim records to be published in all official languages, as soon as possible upon completion of Committee meetings.

F. Future work

165. The Committee noted the views expressed by the Scientific and Technical Subcommittee in paragraphs 120-123 of its report on its thirty-first session (A/AC.105/571) and endorsed the recommendations contained in those paragraphs concerning the agenda of the thirty-second session of the Subcommittee.

166. Regarding the agenda of the Legal Subcommittee, the Committee recommended that the Subcommittee, at its thirty-fourth session:

(a) Should continue its consideration of the question of early review and possible revision of the principles relevant to the use of nuclear power sources in outer space;

(b) Should continue, through its Working Group, its consideration of matters relating to the definition and delimitation of outer space and to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of ITU;

(c) Should continue, through its Working Group, its consideration of the legal aspects related to the application of the principle that the exploration and utilization of outer space should be carried out for the benefit and in the interests of all States, taking into particular account the needs of developing countries.

167. With regard to the item contained in paragraph 166 (a) above, the Committee endorsed the recommendation of the Legal Subcommittee that the working group on nuclear power sources should be suspended for one year, pending the results of the work in the Scientific and Technical Subcommittee, without prejudice to the possibility of reconvening the working group on that item if, in the opinion of the Legal Subcommittee, sufficient progress was made in the Scientific and Technical Subcommittee at its thirty-second session, in 1995, to warrant the reconvening of the working group by the Legal Subcommittee.

168. The Committee recalled its recommendation that the Legal Subcommittee, on a permanent basis, should rotate each year the order of consideration of substantive agenda items. The Committee, however, endorsed the recommendation of the Legal Subcommittee that the order of rotation should be suspended for the 1995 session and that these items should be considered in the same order as in 1994 (items 4, 5 and 3).

169. The Committee took note of the measures that had been initially adopted at the thirty-first session of the Legal Subcommittee as well as additional measures agreed for the next session of the Subcommittee in order to improve utilization of Conference Services. The Committee endorsed the agreement of the Legal Subcommittee that a similar organization of work would serve as the basis for organizing the work of the Subcommittee at its thirty-fourth session.

170. The Committee reiterated that, in accordance with the request contained in paragraph 160 of the present report, the Chairman of the Legal Subcommittee should conduct extensive, open-ended informal consultations, with all members of the Subcommittee, on the working methods and agenda of the Subcommittee, including the consideration of possible new items for inclusion on the agenda of the Subcommittee, and should report thereon to the Committee at its thirty-eighth session, in 1995.

G. Schedule of work of the Committee and its subsidiary bodies

171. The Committee indicated the following tentative timetable for 1995:

	Date	Site
Scientific and Technical Subcommittee	6-17 February	Vienna
Legal Subcommittee	27 March-13 April	Vienna
Committee on the Peaceful Uses of Outer Space	12-23 June	Vienna

172. The Committee agreed that the work of the Committee and its subsidiary bodies should be conducted with maximum flexibility by their respective chairmen, in accordance with paragraph 159 above.

H. Tribute

173. On the occasion of the resignation of the Vice-Chairman of the Committee, Mr. Aurel Dragos Munteanu, to take up other professional engagements, the members of the Committee expressed their gratitude for his service to the Committee.

Notes

1/ See Report of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space, Vienna, 9-21 August 1982 (A/CONF.101/10 and Corr.1 and 2).

2/ Official Records of the General Assembly, Forty-eighth Session, Supplement No. 20 (A/48/20), para. 119.

3/ Official Records of the General Assembly, Forty-eighth Session, Supplement No. 20 (A/48/20), para. 125.

ANNEX

Working methods and possible additional agenda items for the Legal Subcommittee

Proposals for consideration through open-ended informal consultations to be conducted by the Chairman of the Legal Subcommittee at its next session and by the Working Group of the Committee referred to in paragraph 158 of its report.

1. Possibility of shortening the length of the session of the Subcommittee through streamlining of its agenda and more flexible use of the time available.

2. Possibility of utilizing the time currently allocated to the Subcommittee to consider an array of additional items that might be included in its agenda and to include in it those items on which there is consensus.

3. Possibility of establishing, through consensus, a working agenda, comprised of items upon which substantive progress is possible.

4. Possibility of separating the issue on definition and delimitation of outer space from the issue of the character and utilization of the geostationary orbit.

5. Possibility that discussions may be held immediately following a statement, on the subject addressed by that statement, even when the list of speakers for the corresponding agenda item has not been exhausted.

6. Possibility of a rotating membership in the Committee and its two subcommittees, whereby new members would be admitted into COPUOS in replacement of current members who do not participate in the work of the Committee on a regular basis.

7. Possibility of holding informal meetings and consultations outside of the work schedule of the Subcommittee (i.e. before or after meeting times and at lunch time).

8. Possibility that all informal meetings and consultations be provided with interpretation services (i.e. during the work schedule of the Subcommittee).

9. Possibility that the Chairmen of the COPUOS and its subcommittees are elected on a rotating basis by members of the Committee.

10. Possibility of eliminating the item on General Exchange of Views in both Subcommittees.

11. Possibility that the summaries of space activities and programmes conducted during the previous year be deleted from the statements in the General Exchange of Views and that printed material detailing those activities be made available to interested delegations.